












PARTNER HIGHLIGHT



EPSAN | Engineering Plastics is an agile and innovative producer of high-performance engineering plastics. **Epsan** offers special solutions to its customers with **PA6 & PA66, PPA, PBT, PET, PBT/PET, PA/ABS and PBT/ASA** compounds.

With more than 40 years of experience, especially in automotive; It produces innovative, reliable, effective, sustainable and environmentally friendly products based on globally increasing customer expectations in all industries that touch your life such as transportation, electrical, white goods, agriculture and health.

Epsan has production facilities in Turkey, offices and logistics centers worldwide. Recently opening up a USA location headquartered out of Georgia with commercial location in Michigan. It has a production capacity of 62,000 tons/year in a closed area of 32,000m².

 <p>HYDROLYSIS RESISTANCE</p>	<p>Epsan's GFH product groups provide high quality products particularly for under-the-hood applications that require hydrolysis resistance and thermal resistance.</p>
 <p>HEAT AGING</p>	<p>EPLAMID Heat Aging PA66, PA6, & PPA Pursuing studies for applications that require high thermal resistance, Epsan works on product groups that are resistant up to 210°C.</p>
 <p>SPRINT GRADES</p>	<p>The new Epsan Sprint grades exhibits 80% higher flow improvement without any change in its mechanical and thermal properties compared to its standard alternatives.</p>
 <p>E-MOBILITY</p>	<p>EPLAMID PA6, PA66, PPA, PBT/ASA resins New components for vehicles made from engineering plastics are entering into the automotive industry: the conventional combustion engines are being replaced by electrical and hybrid motors. Requirements for the EV applications: Halogen free flame-retardant, High voltage (CTI 600 V and even more), Flame resistance, Low smoke density and toxicity, Orange colored material, High energy density, Aggressive environment, Thermal conductivity, EMI Shielding</p>
 <p>EMI SHIELDING</p>	<p>EPIMIX PBT & EPLAMID PA66 EMI Shielding resins. Power electronics are sources of interference by producing electro magnetic radiation. EMI Shielding protects environment and application against electromagnetic interference. Suitable for metal replacement applications . weight reduction.</p>
 <p>LIGHTWEIGHT</p>	<p>EPLAMID PA6 and PA66 based carbon fiber reinforced lightweight solutions that offer these properties: Lightweight, High stiffness and strength, Electrical conductivity, & Low thermal expansion coefficient</p>
 <p>HIGH PERFORMANCE POLYAMIDE: PPA</p>	<p>EPLAMID HT - High Performance PPA provides high heat resistance, low moisture absorption, hydrolysis resistant, High heat resistance crucial for the life cycle of the product. EPLAMID HT maintains its initial properties even at 140 °C of a continues running temperature and exhibits minimal creep at even high moist environments which standard Polyamide 6 and Polyamide 66 compounds can not.</p>
 <p>COLORING & SURFACE QUALITY & AESTHETICS</p>	<p>EPIMIX PBT-PET, EPLAMID PA6 & PA66 Precolored Resins. Automotive & Non-Automotive.</p>
 <p>FLAME RETARDANT</p>	<p>EPLAMID PA6, PA66 & PBT resins. Flame retardant; Low Smoke Density, Halogen-Free Flame Retardant Solutions. UL & RTI Approvals:</p>
 <p>RECYCLE: EPLON+</p>	<p>EPLON+ high performance PA6 & PA66 recycled compounds produced from post industrial fiber waste and polymerization waste of polyamide producers. Eplon+ has an LCA (Life Cycle Assessment) certificate that proves it releases 81% less CO₂ and consumes 47% less water.</p>



HIGH PERFORMANCE POLYAMIDE: PPA

*Direct offsets are available to Zytel® HTN, Amodel®, & Grivory® HT polyphthalamide (PPA).



GROWTH FOCUS TOPICS | High Performance Polyamide: PPA

- High heat resistivity
- Low moisture absorption
- Hydrolyses resistant
- High heat resistance is crucial for the life cycle of the product
- EPLAMID HT maintains its initial properties even at 140°C of a continuous running temperature and exhibits minimal creep at even high moist environments which standards PA6 and PA66 compounds can not.
- Different grades of EPLAMID HT are developed to provide end users the cost/performance solutions.

PRODUCT CHARACTERISATION

EPLAMID HT00	PA 6T/X
EPLAMID HT02	PA 6T/66
EPLAMID HT03	PA 66+6I/6T

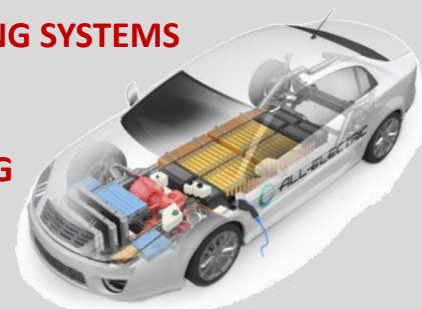
PPA APPLICATIONS

- Pump wear rings
- Gas pipes
- Toothbrush and hairbrush bristles
- Sporting goods
- Electrical insulation, switches,
- Fuel lines
- LED headlights
- Metal replacement
- Catheter tubes
- Wire casings
- Automotive motor bobbin parts
- Fuel line connectors
- Fuel modules
- Coolant pumps
- Bushings and bearing pads
- Brake fluid & SCR connectors

*HPPA (High Performance Polyamide)



- HIGH VOLTAGE & CONTROL SYSTEMS
- POWER ELECTRONICS
- BATTERY CASING AND HOUSING SYSTEMS
- MODULE SYSTEMS
- COOLING SYSTEMS
- ELECTROMAGNETIC SHIELDING
- ADAS SYSTEMS
- CHARGING SYSTEMS
- PLUG HOUSING AND HOLDER



- Vertical Switch Disconnecter
- Rotary Switches-Switch Box
- Cable Gland
- Power Socket
- Fridge Lamp Holder
- Terminal Blocks
- Connection Box
- Circuit Breaker

AUTOMOTIVE APPLICATIONS & RECOMMENDATIONS

Interior Applications

Exterior Applications

Under The Hood Applications

INTERIOR APPLICATIONS

- BRAKE & CLUTCH PEDAL: EPLAMID 6 GF50/60, EPLAMID 66 GF35/50
- SHIFTER HOUSING: EPLAMID 6 GF35/50, EPLAMID 66 GF 35/50
- PADDLE: EPLAMID 6 GFU 35
- SUNVISOR: EPLAMID 6 GF35/40
- ANTENNA: EPIMIX PBT BK
- HOOD OPENER PALLET: EPIMIX PBT/PET GF30
- DOOR HANDLE: EPLAMID 6 GF30
- POLL GUIDE: EPLAMID 6 IMP
- ARM REST: EPLAMID 6 GFS 30, EPLAMID 6 GFS 60
- SEAT PLASTICS: EPLAMID 6 GF30
- SHOCK ABSORBER: EPLAMID 66 GF50, EPLAMID 66 GF1 13
- AIR FLAPS: EPLAMID 6 GF50
- CABLE GUIDE CHANNEL: EPLAMID 6 SPRINT GF60

Serial Production (Green checkmark)
Under Evaluation (Grey X)

EXTERIOR APPLICATIONS

- EXTERNAL MIRROR: EPLAMID 6 GF50, EPLAMID 66 GF50
- LIGHTING SYSTEM BRACKET: EPIMIX PBT GF 30/50
- FRONT END MODULE: EPLAMID 6 GF30/35, EPLAMID 6 SPRINT GF50
- WINDOW FRAME: EPLAMID 6 GF15 +IMP
- SUNROOF FRAME: EPIMIX PBT/ASA GF30
- EXTERNAL DOOR HANDLE: EPLAMID 6 GF30 + UV, EPIMIX PBT/PET GF30 + UV, EPIMIX PBT/PET GF30 - Painted
- DOOR HANDLE SUPPORT: EPLAMID 6 GF30/35, EPLAMID 6 GF50, EPLAMID 6 GF40

Serial Production (Green checkmark)
Under Evaluation (Grey X)

EPLAMID

EPIMIX

EPLON+

• EPLAMID 6	PA 6	• EPIMIX PBT	PBT	• EPLON+ 6	PA 6
• EPLAMID 66	PA 6.6	• EPIMIX PBT/PET	PBT/PET	• EPLON+ 66	PA 6.6
• EPLAMID HT	PPA	• EPIMIX PBT/ASA	PBT/ASA	• EPLON+ HT	PPA
		• EPIMIX+	PBT/R-PET		
		• EPIMIX+	PBT		

UNDER THE HOOD APPLICATIONS

- ENGINE COVER: EPLAMID 66 GF30, EPLAMID 66 GF40, EPLAMID 6 GF30
- INTAKE MANIFOLD: EPLAMID 6 GF30/35
- AIR FILTER BOX: EPLAMID 6 GF30/35, EPLAMID 6 GF35
- RADIATOR FAN: EPLAMID 6 GF30, EPLAMID 66 GFH 30
- RADIATOR SHROUD: EPLAMID 6 GF30, EPLAMID 66 GFH 30
- ENGINE MOUNT: EPLAMID 66 GF50
- CYLINDER HEAD COVER: EPLAMID 6 GF35, EPLAMID 66 GF35, EPLAMID 6 GF40
- OIL PAN: EPLAMID 6 GF30/35/40
- OIL DIPSTICK: EPLAMID 6 GF15
- COOLING SYSTEM: EPLAMID 66 GFH 30

Serial Production (Green checkmark)
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QUALITY & PRODUCT & SUSTAINABILITY CERTIFICATIONS



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